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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/665,034	09/19/2000	Elissa E. Carapella	042390.P6139	5981

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EXAMINER

CHANG, RICK KILTAE

ART UNIT	PAPER NUMBER
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3729

28

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/665,034

Applicant(s)

CARAPPELLA ET AL.

Examiner

Rick K. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-20 and 35-55 is/are pending in the application.
- 4a) Of the above claim(s) that are not listed in item 6 below is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-20, 39-44 and 50-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/8/03 has been entered.

Claim Objections

2. Claim 18, line 3, is objected to because of the following informalities: amend "second" to --inner side--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13, 16, 39, 50 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Bernhardt (US 5,218,515).

Bernhardt discloses conductors 144 wrap around three sides of the perimeter wall 140 and laser pantography to form conductive strip lengthwise along the perimeter wall 140; 125 is connected to 144 via 143;

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 14, 18, 42, 51 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernhardt (US 5,218,515) in view of Sato et al (US 5,858,816).

Bernhardt fails to disclose the conductors 144 are plated and masking surfaces of the bond shelf except for portions of the bond shelf to be plated, the inner side surface of the bond shelf being unmasked.

Sato discloses 10 is plated and masking surfaces of the bond shelf except for portions of the bond shelf to be plated, the inner side surface of the bond shelf being unmasked (col. 4, lines 56-67, col. 5, lines 1-67 and Figs. 1(a)-1(i)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bernhardt by plating the conductive material masking surfaces of the bond shelf except for portions of the bond shelf to be plated, the inner side surface of the bond shelf being unmasked, as taught by Sato, for the purpose of providing an evenly distributed thin metal layer to form conductors along the desired surfaces.

7. Claims 15, 40 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernhardt (US 5,218,515) in view of Japp et al (US 6,073,344).

Bernhardt fails to disclose drilling the bond shelf including the conductive strip.

Japp discloses laser drilling (30 and 32) the bond shelf including the conductive strip (area 34 consisting of 26 and 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bernhardt by drilling the bond shelf including the conductive strip to the Bernhardt's device, as taught by Japp, for the purpose of providing a clean electrical isolation between two conductive areas without requiring deburing or other chemical treatment.

8. Claims 17, 19, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernhardt (US 5,218,515)/Sato et al (US 5,858,816) as applied to claims 13-14, 18, 39, 42 above, and further in view of Whitehead et al (US 4,682,270).

Bernhardt/Sato fail to disclose plating gold onto copper and etching the conductive material.

Whitehead discloses plating gold onto copper (col. 4, lines 54-57) and etching the conductive material (subtractive method).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bernhardt/Sato by plating gold onto copper and etching the conductive material, as taught by Whitehead, for the purpose providing better electrical connection between devices and removing material without any burrs.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernhardt (US 5,218,515)/Sato et al (US 5,858,816)/Whitehead et al (US 4,682,270) as applied to claims 13-14 and 18-19 above, and further in view of Japp et al (US 6,073,344).

Bernhardt/Sato/Whitehead fail to disclose drilling the bond shelf.

Japp discloses laser drilling (30 and 32) the bond shelf including the conductive strip (area 34 consisting of 26 and 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bernhardt/Sato/Whitehead by drilling the bond shelf to the Bernhardt/Sato/Whiteheads' device, as taught by Japp, for the purpose of providing an area for heat expansion.

10. Claims 41 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernhardt (US 5,218,515) in view of Whitehead et al (US 4,682,270).

Bernhardt fails to disclose etching the conductive material.

Whitehead discloses etching the conductive material (subtractive method).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bernhardt by etching the conductive material, as taught by Whitehead, for the purpose removing material without any burrs.

11. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernhardt (US 5,218,515)/Sato et al (US 5,858,816)/Whitehead et al (US 4,682,270) as applied to claims 39 and 42-43 above, and further in view of Japp et al (US 6,073,344).

Bernhardt/Sato/Whitehead fail to disclose drilling the bond shelf including the conductive strip.

Japp discloses laser drilling (30 and 32) the bond shelf including the conductive strip (area 34 consisting of 26 and 12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bernhardt/Sato/Whitehead by drilling the bond shelf including the conductive strip to the Bernhardt/Sato/Whiteheads' device, as taught by Japp, for the purpose of

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providing a clean electrical isolation between two conductive areas without requiring deburing or other chemical treatment.

Response to Arguments

12. Applicant's arguments with respect to claims as shown above have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. **Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity. Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.**

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (703) 308-4784. The examiner can normally be reached on 5:30 AM to 1:30 PM, Monday through Thursday.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

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A handwritten signature in black ink, appearing to read 'Richard Chang', written over a horizontal line.

RICHARD CHANG
PRIMARY EXAMINER

RC

April 1, 2004